HITACHI

OPERATING GUIDE FOR MODEL CL2159TA

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HITACHI TELEVISION MODELS CL2159TA

To operate your receiver at the peak performance, please read this operating guide carefully and retain it for future reference.

HITACHI TELEVISION MODELS CL2159TA

Pour garantir le fonctionnement optimal de ce poste de télévision, il est conseillé de commencer par lire avec attention ce manuel d'utilisation.

MODELLI DI TELEVISORI HITACHI CL2159TA

Per un funzionamento ottimale del televisore, leggete attentamente queste istruzioni usandole come riferimento.

HITACHI TELEVISIETOESTELLEN MODEL CL2159TA

Om uw ontvanger optimaal te laten presteren, moet u deze handleiding zorgvuldig doornemen en ze bewaren zodat u ze later nog kunt raadplegen.

HITACHI FERNSEHER MODELS CL2159TA

Um den effektiven Gebrauch Ihres Gerätes sicherzustellen, lesen Sie diese Bedienungsanleitung sorgfältig und heben Sie sie zum späteren Nachschlagen gut auf.

Mains Supply

This receiver is designed to operate on 220-240v 50Hz only.

Raccordement au secteur

Ce téléviseur a été conçu pour fonctionner en 220-240 v 50Hz uniquement.

Alimentazione

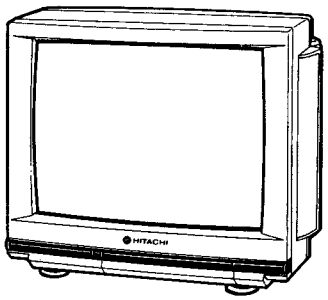
Funziona soltanto a 220-240v 50Hz.

Voeding

Deze ontvanger werkt met een netspanning van 220-240v 50 Hz.

Stromversorgung

Dieses Gerät arbeitet mit einer Netspannung von 220-240 v 50Hz.



on/off (push type)

touche (marche/arrêt)

"acceso/spento" on/off (a pressione)

AAN/UIT (drukken)

Ein/Aus (brucktaste)

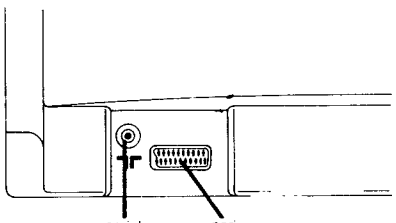
controls behind door (push to open)

boutons de commande situés derrière le volet. (pousser pour ouvrir)

comandi dietro lo sportellino (Premere per aprire)

Bedieningen achter luikje (drukken om te openen)

Schaltknöpfe hinter der Klappe (Zum Öffnen drücken)



aerial socket / prise antenne / presa dell'antenna / Antenne-ingang / Antennenanschluß

peri socket / prise péritélévision / presa europea (scart) / Peri-aansluiting. / Peri-Anschluß

Red LED's for stereo/dual sound

Seleziona la funzione bilingue quando é trasmessa o ripristina l'audio mono dall'audio stereo

Voyants verts pour la stéréo ou le double language

rode LED's voor stereo/tweetalig geluid

Rote LED's für stereo/Dual-Ton

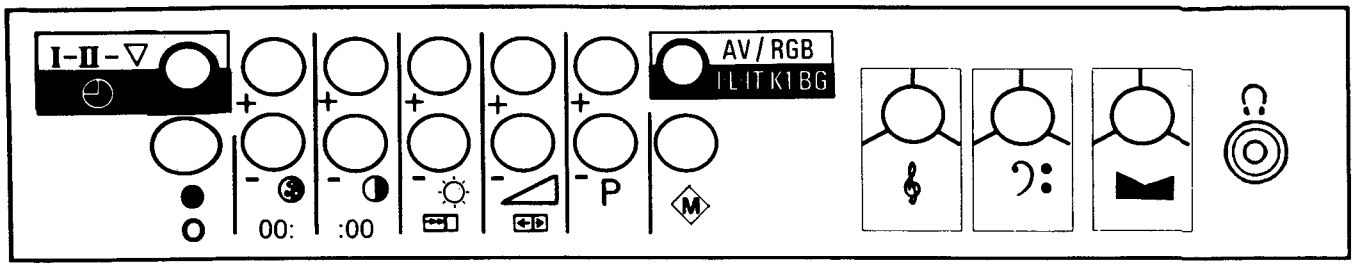
seven segment display

afficheurs à sept segments

Display a 7 segmenti

display met zeven segmenten

Sieben–Segment–Anzeige



NOTE:

Most of the above control buttons have dual functions. These are highlighted by gold and white writing or symbols. When the button marked ⚷ is pressed, the functions will alternate between the "NORMAL" or "SET UP" mode. The normal mode functions are represented by the white lettering, and the set up mode by the gold. See table opposite for each buttons function in the two different modes. To help you recognise which mode is in operation, the seven segment display will show two brackets [ ] when in the "SET UP" mode.

NOTE:

La plupart des boutons de commande représentés ci-dessus correspondent à des fonctions doubles matérialisées par des inscriptions ou des symboles or et blancs affichés sur l'ecran. Lorsque la touche ⚷ est enfoncée, le choix des fonctions est déterminé par le fonctionnement du téléviseur en mode "NORMAL" ou en mode "SET UP" (sélection des émetteurs). Les inscriptions en blanc correspondent au mode "NORMAL"; celles en or au mode "SET UP".
Le tableau ci-contre présente l'ensemble des boutons et leurs fonctions dans les modes "NORMAL" et "SET UP".
Les parenthèses [ ] visualisées sur l'afficheur indiquent que le téléviseur fonctionne en mode "SET UP".

NOTA:

La maggior parte dei tasti qui sopra illustrati svolgono una doppia funzione, evidenziata da simboli o lettere in bianco e oro. Quando si preme il tasto ⚷ , le funzioni si alternano tra le modalità operative "NORMAL" o "SET UP". La funzione "normale" è segnalata dalle lettere bianche, quella di preparazione (o SET UP) dalle lettere oro. La tabella della pagina accanto spiega la funzione dei tasti nelle due modalità.
Per facilitare il riconoscimento della modalità attiva, la descrizione "SET UP" apparirà sul display delimitata da parentesi [ ]

MERK OP:

De meeste van de bovenstaande bedieningstoetsen hebben een dubbele functie. Deze zijn aangegeven door goudkleurige en witte opschriften en symbolen. Wanneer de ⚷ toets wordt ingedrukt, zullen de functies afwisselend werken in de "NORMAL" of de "SET UP"-stand. De "NORMAL"- functies zijn aangegeven in witte opschriften; de "SET UP"-functies in goudkleurige opschriften. In de table hiernaast worden alle toetsen en hun functies in de standen "NORMAL" en "SET UP" verklaard. De vierkante haakjes [ ] op de display geven aan dat het toestel zich in de "SET UP"- stand bevindt.

BEACHTEN SIE:

Die meisten der oben abgebildeten Kontrollknöpfe habe zweifache Funktionen. Diese sind durch goldene und weiße Schrift und Symbole gekennteichnet. Wenn Sie die Taste ⚷ drücken, werden die beiden Funktionen abwechselnd angezeigt: NORMAL oder SET UP. Die NORMAL-Funktionen sind in weißer, die SET-UP-Funktionen in goldener Schrift angegeben. Beachten Sie die Tabelle auf der gegenüberliegenden Seite, wo jede Taste mit ihren zwei verschiedenen Funktionen erklärt wird.
Damit Sie erkennen können, welche Funktionsart gerade in Betrieb ist, erscheinen auf der 7-Felder-Anzeigetafel zwei Klammern [ ] wen Sie die SET-UP-Funktionen gewählt haben.

"NORMAL" MODE 0	ENGLISH	FRANCAIS	ITALIANO	NEDERLANDS	DEUTCH
I-II-▽	selects dual language when transmitted or returns to mono sound from stereo modes	Sélectionne le double langage s'ill est transmis ou retourne du mode stéréo en mode mono.	Seleziona la funzione bilingue quando é trasmessa a ripristina l'audio mono dall 'audio stereo	selecteren tweetalig geluid indien ontvangen of terugkeren van stereo naar mono	Wählt Zweit-Sprache, wenn übertragen, oder kehrt zum Mono-Ton von den Stereo-Betriebs-arten zurück.
● O	changes mode from "NORMAL" to "SETUP"	passage du mode "NORMAL" à "SET UP"	Commutazione NORMAL/SETUP	omschakelen tussen "NORMAL" en "SET UP"	Wechselt die Betriebsart Von NORMAL zu SET-UP
+−	colour level UP or DOWN	réglage des couleurs	Colore PIU'/MENO	kleur OP of NEER	Farbregler + vorwärts — rückwärts
+−	contrast level UP or DOWN	réglage du contraste	Contrasto PIU'/ MENO	contrast OP of NEER	Kontrastregler + vorwärts — rückwärts
+−	brightness level UP or DOWN	réglage de la luminosité	Luminosità PIU'/ MENO	helderheid OP of NEER	Helligkeitsregler + vorwärts — rückwärts
+−	volume level UP or DOWN	réglage du volume	Volume PIU'/ MENO	volume OP of NEER	Lautstärkeregler + vorwärts — rückwärts
P + −	programme number UP or DOWN	choix du programme	Numero del programma PIU'/ MENO	programmanummer OP of NEER	Programmwahl + vorwärts — rückwärts
AV / RGB	enables TV to accept inputs from VCR's or computers	connexion du téléviseur à un ordinateur personnel ou à un magnétoscope	Permette alla TV di accettare ingressi da VCR o computer	TV instellen op aansluiting van videorecorder of computer	Verbindung zu Video- oder Computerbetrieb
M	stores control levels, and AV/ RGB mode	mise en mémoire des niveaux et informations à l'exception des réglages de tonalité	Memorizza livelli controllo, e AV/ RGB	opslaan regeling niveaus en AV/ RGB-stand	Speichert die entsprechenden Eingaben, und AV/ RGB
	bass control	réglage des basses	Controllo dei bassi	balansregeling	Baßkontrolle
	treble control	réglage des aigus	Controllo degli acuti	regeling lage tonen	Höhenkontrolle
	balance control	réglege la balance	Regolazione del Bilanciamento	regeling hoge tonen	Balance
	headphone socket	prise pour casque d'écoute	Presa cuffia	hoofdtelefoon-ingang	Kopfhöreranschluß

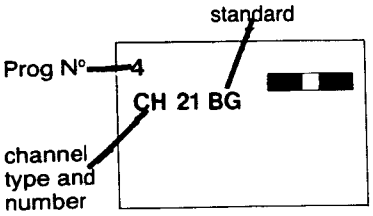
"SET UP" MODE ●	ENGLISH	FRANCAIS	ITALIANO	NEDERLANDS	DEUTCH
	start signal search routine + up – down	recherche progressive ou dégressive des émetteurs	Avvia la routine di ricerca segnali + più – meno	startsignaal zoeken + op — neer	Starttaste Suchlauf + vorwärts - rückwärts
	gives minor tuning adjustments + up – down	réglages progressif ou dégressif de précision	Mini regolazioni di sintonia + più – meno	fijnafstemming + op — neer	Feineinstellung + vorwärts - rückwärts
P + −	programme number UP or DOWN	sélection progressive ou dégressive des numéros de programmes	Numero del programma PIU'/ MENO	programmanummer OP of NEER	Programmwahl + vorwärts — rückwärts
I.L.IT.KI.BG	selects one of the 5 standards available	sélection d'une des cinq normes disponibles	Seleziona uno dei 5 standard disponibili	selecteert één van de 5 beschikbare normen	Wahl der 5 möglichen Standards
M	stores required STANDARD and all tuning information	mise en mémoire de la norme voulue et de toutes les données de réglage des émetteurs	Memorizza lo STANDARD desiderato e tutti i dati sulla sintonia	slaat de gewenste NORM en alle afstemmingsin-formatie op	Speichert den gewählten STANDARD und alle tuning-Informationen
	selects Timer mode	sélectionne le mode minuterie	Seleziona la funzione timer	selecteert de TIMER-stand	Wählt Zeitschal-tungs-Modus
00:	sets hours for "off" timer	Règle les heures pour l'arrêt de la minuterie	Seleziona le ore netta funzione spegnimento	instelling uren voor "OFF" timer	Stellt Studen ein für "Aus/ Ein"-Zeitschalter.
:00	sets minutes for off timer	Règle les minutes pour l'arrêt de la minuterie	Poiziona le minuti nella funzione spegnimento	instelling minuten voor "ON" timer	Stellt Minuten ein für "Aus/ Ein"-Zeitschalter.

TUNING PROCEDURE

SEARCH TUNING:

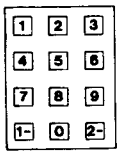
1. Press ⚙ button to obtain "setup" mode. Seven segment display will be as shown, [ ] and the on screen display will turn yellow.
2. [I.L.IT.KI.BG] button. Press repeatedly till the standard you require appears in the on screen display.

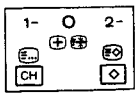
Control panel



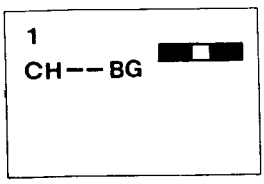
There may also be a programme name in the on screen display if that option has been used (described later).

3. Press the P + or P — buttons to select the programme number you wish to start with. The handset digits may be used to change the programme number if preferred.

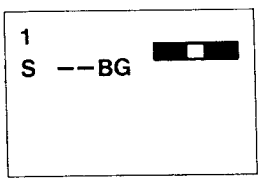


4. 

Press the handset button "CH " to obtain the channel type.

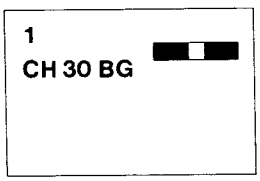


first press
(TV channels)



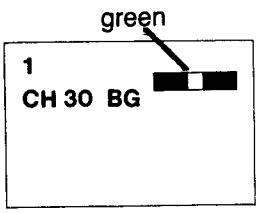
second press
(cable channels)

5. Using the handset digits 0-9, input a number of your choice i.e. 08 or 21 for example. This number will replace the two dashes of the on-screen display. Press [→|] + or – button on the control panel. Search routine begins. Channel number reappears, increasing or decreasing till a station is detected.

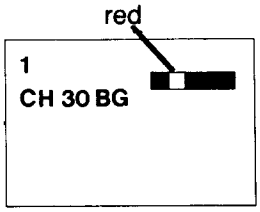


6. Press [→|] + or – button if detected signal is unwanted. Search will resume till new signal obtained.

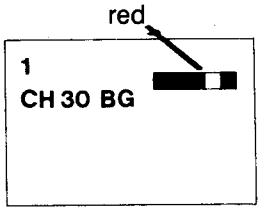
7. Press [+] button on control panel if fine tuning is necessary. On screen display shows a tuning indication of a yellow strip and 1 green block, which changes to red as you fine tune up or down the scale.



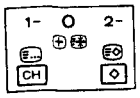
center of scale



moving down scale

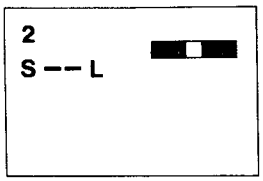


moving up scale

8. 

When satisfied, press ◇ button on handset or front control to "store".
The on-screen display turns red for 2 seconds then returns to yellow.

9. Enter new programme number, changing channel type or standard if desired.



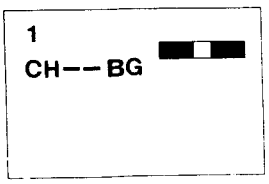
Press ⊣ button to begin new search. Repeat the tuning and store procedure till all your desired programmes are stored.

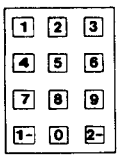
10. Press ⏻ button on control panel to return to TV mode. (On screen display turns green.)

DIRECT TUNING

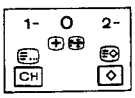
To use this tuning method, it is necessary to know the channel number of all the stations (TV or cable) you require. Follow steps 1-4 as for "SEARCH TUNING" to obtain the on-screen display below.

example



1. 

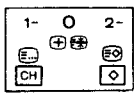
Use these handset digits to select the channel. If you choose channel 5 for example, press 0 first then 5.
As each digit is entered it will take the place of a dash.
The signal appears once the second digit is entered.

2. 

Press the ◇ button to "store".
Display turns red for 2 seconds, then returns in yellow.

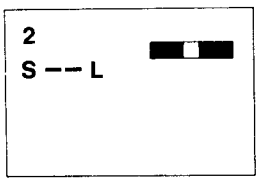
3. Press P + up or P — down buttons to select new programme number.

Press this button on the front control panel if new standard required.



Press the CH button on handset if new channel type required.

4. On-screen display changed.



5. Repeat steps 1-3 till all required programmes are stored. Press ⏻ button on front control to return to TV mode.

6. If you desire to change a channel number only and not the standard, you can do this without entering the "set up" mode. Simply enter the channel number you require, using the CH handset button then digit buttons as explained in step 1. However, if you wish to store this new channel you must press the ◇ button to "store" before the on-screen display disappears. Should you fail to do this, press the recall button on the handset ⊞ . The display will then reappear, allowing you to press the ◇ button to "store" the programme on display.

CUSTOMER CONTROLS

Adjust the colour , contrast , volume and brightness levels using the handset or front controls. Press ◇ button on handset or front controls to "store" all customer control levels.
Note: One of the customer control symbols must be displayed on-screen when the ◇ button is pressed, or the store function will not operate.
Adjust bass and treble on front controls to suit individual taste.

21 PIN SCART SOCKET

This socket located at the rear of the receiver, enables direct connection of VCR's or personal computers to your TV. A special lead will be required, so please consult your dealer, as not all equipment will have this facility. Once this lead is connected, switch your equipment "ON". The TV signal will then be replaced by the signal from the auxiliary equipment. If your equipment does not have an equivalent connector, follow this procedure:—

1. Chose a programme number that you wish to use for your equipment. A programme name can also be given if required.
2. Keep pressing the "AV/RGB" button on the front control till one of the following modes are obtained. When the AV or RGB mode is selected, the TV signal disappears.

(for video input) (for computer input)

3. Press ◇ button on the front control or handset to "store". Every time you select that programme number, the AV or RGB mode appears. The TV signal is then replaced by inputs from your auxiliary equipment.

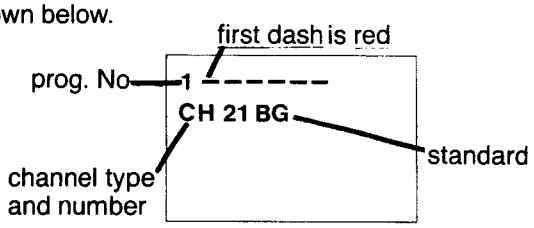
Note: When the AV/RGB mode is selected, the last channel that was chosen will still be output from the PERI socket.

4. This receiver is capable of giving a stereo output from true stereo signals that are input via the scart socket.

PROGRAMME NAME

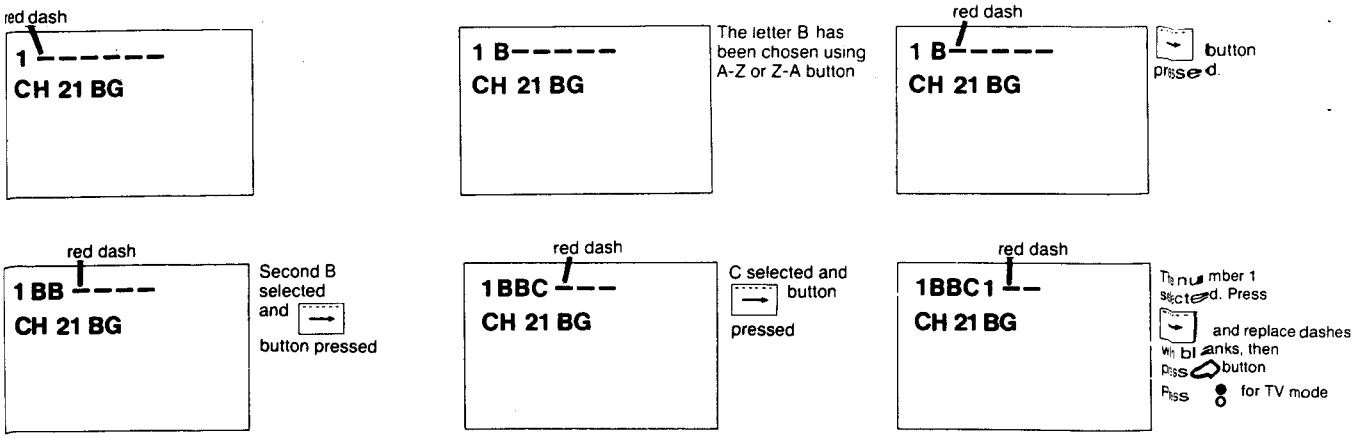
To give a name to programmes 1-9 follow the procedure outlined below. A maximum of 6 characters can be entered.

1. Press button to enter set up mode.
2. Press the handset button marked . All the relevant information concerning the current programme is now displayed on-screen as shown below.

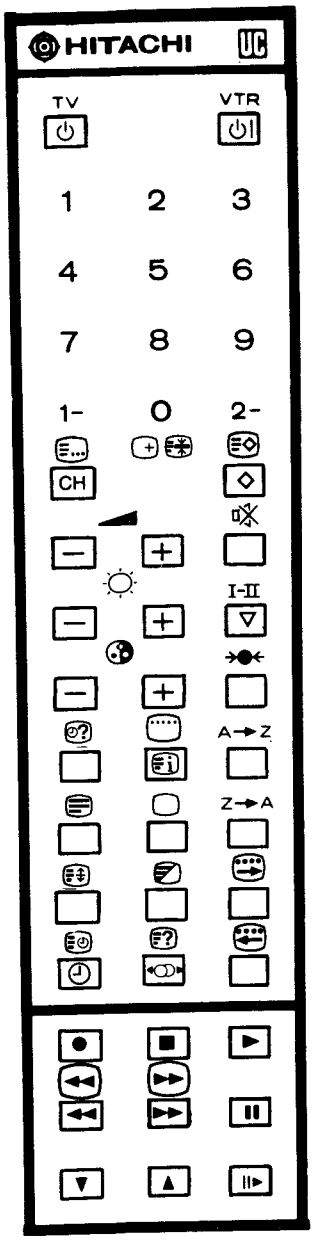


3. Press the A-Z or Z-A buttons on the handset to move up or down the alphabet, till your desired letter appears in place of the first dash. A number can be entered using the handset digits 1-9.
4. Press button. Your chosen letter becomes yellow, and the next dash red.
5. Repeat 3 and 4 till name completed, then press button, so that next dash or first letter becomes red. The programme name is then ended. If less than 6 characters are required, press A-Z or Z—A button till a blank replaces the first remaining dash, then press button to make the next dash red. Repeat till all remaining dashes are removed. Press the ◇ button on the handset to "store". The display turns red for 2 seconds. Press the button on the control panel to return to TV mode.
6. Should an error be made, press the handset button till error is coloured red. Input correct letter, then press button till the dash or letter after last entry turns red. Press handset button ◇, then control button to return to TV mode.

Below is an example using the English BBC1 station.

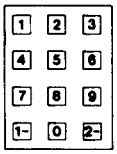


Remote Control Transmitter

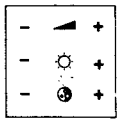


NOTE: THIS REMOTE CONTROL UNIT CAN OPERATE HITACHI VCR'S THAT HAVE THE SYMBOL.

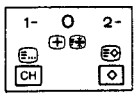
Programme Selection



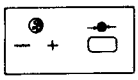
To select programmes up to 9, press the buttons 1-9. The on-screen display shows programme number and name in green for 5 seconds. Press 1- then second digit for programmes 10-19, or 2- followed by second digit to select 20-29.



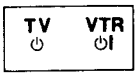
Press these buttons to adjust volume, brightness, and colour. The stored levels will always apply from switch on.



Press ◇ button to "store" tuning information and customer controls etc.

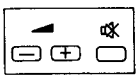


After alteration of colour, brightness, or volume by remote control, press →•← to return to "stored" levels.

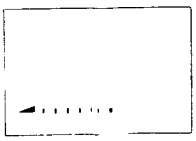


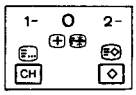
Press the ⏻ button to place TV into it's standby condition. Seven segment display shows two bars to indicate this.

Press one of the handset digits 1-9 to resume operation.

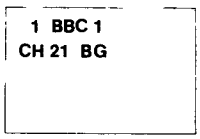


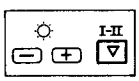
To turn sound off instantly press 🔇. The on-screen display shows volume symbol and scale all in red for 5 seconds. To return the sound press 🔇 button once more, or + — button.



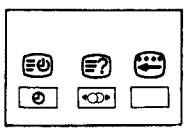


Pressing the ⊞ button will display the programme name and number, channel type and number, and standard in green for 3 seconds.



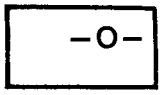


Pressing the button marked I-II when a dual language broadcast is received, will cause the second language to be obtained. The two red LED's in the 7 segment display will illuminate alternatively. When a stereo broadcast is received, pressing this button returns the set to mono sound. A red square appears on the right hand side of the screen for approximately 15 seconds to indicate this.



Pressing the button ◂◯▸ will produce the "effects" mode. There are three possible modes available for selection, and these can be identified by the following on-screen displays.

Psuedo stereo

Extra wide psuedo stereo 

Extra wide stereo

When a true stereo signal is received, both red LED's in the seven segment display will become illuminated. Which of the above symbols appear on screen will depend on the type of signal being received:-

AV mode with stereo input to 21 pin scart socket:-
First press of ◂CD▸ button O , second press -O-, third press — —, fourth press returns to normal operation.

Stereo broadcast received:-
First press of ◂CD▸ button — —, second press returns to normal operation.

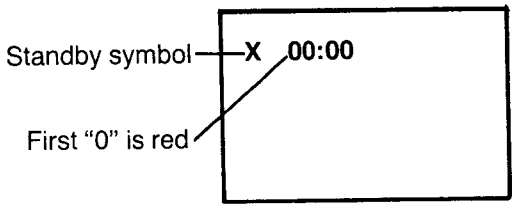
Mono broadcast received:-
First press of ◂CD▸ button O , second press -O-, third press returns to normal operation.

OFF/ON TIMER

With this facility you can programme the television to switch to standby after a certain time.
This is done using the remote control unit or the TV control panel with the television in the "SET UP" mode.

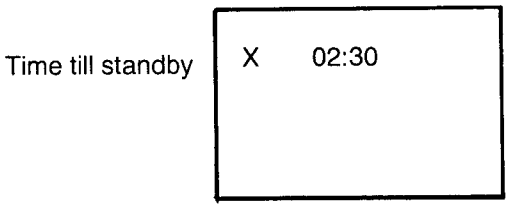
REMOTE CONTROL PROGRAMMING

Press the ⏲ button on the remote control unit to call up the standby display on the screen. When the television is in normal mode the display disappears after about 20 seconds unless data is transmitted, but in the "SET UP" mode will stay permanently on screen. In the "NORMAL" mode the first "0" of the display is red and the rest green. In the "SET UP" mode the first "0" is also red but the rest are yellow.



Using the 0 to 9 numeric keypad on the RC unit, do not programme the time you wish the television to go into standby but the hours and minutes corresponding to the period of TV running time until standby. If for example the time now is 8 p.m. and you want the TV to go into standby at 10.30 p.m., you should enter 02:30, and the display will show this as follows:

Example

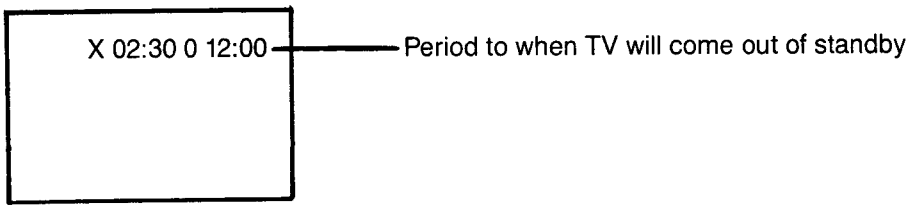


Push the ◇ button to enter the time till standby in the memory. The display will show red for a few seconds before reverting to green or yellow.
With the L standard (French standard) the access to programmed switch-on differs slightly (on some models). The only difference is in the fact that there are not 4 but 3 zeros after the switch-on symbol (0).

SWITCH-ON PROGRAMMING PROCEDURE

Push the ⏲ button a second time to call up the switch-on display on the screen. This consists of 3 zeros and not 4 as with standby (on some models in system L).

Use the remote control numeric keypad to enter the total time (in hours and minutes) when you wish the TV to come out of standby. If as in the preceding example the time now is 8 p.m. and you have programmed the standby for 10.30 p.m. you must display X 02:30. You now wish the TV to switch on at 8 a.m. the next morning. Since it is now 8 p.m., you will have to enter the difference between the time now (8 p.m.) and the switch-on time (8 a.m.), which is 12 hours. You should therefore key in 1, 2, 0 and 0 followed by ◇ to save. The TV starts the countdown as soon as the memory button is pressed. Although this countdown will not be displayed, the TV will be timing out and will switch on when 12 hours have elapsed. This time can be preset to the nearest minute. The television can be programmed to switch on automatically without a standby having to be programmed as well.



Press the ◇ button to save the data. The screen display will change to red for approximately 2 seconds before reverting to yellow. If you have entered the data in the "SET UP" mode, push the ⚙ button to return to the "NORMAL" mode. The display will go green and will disappear after approximately 20 seconds. The television will then start to count down the programmed running time till standby and will switch to standby when that time has elapsed. It then starts to count down the programmed standby time, at the end of which it will switch itself on. The user must then operate the ☎ key on the Handset unit within 2 minutes. If this is not done the television will revert to the standby mode as a safety measure.

CONTROL PANEL PROGRAMMING

If you use the TV control panel for programming, enter the "SET UP" mode by pressing the ⚙ key. Press the ⏲ key to enter the standby programming mode and set the hour with the + and — keys of the "00:" symbol and the minutes with the + and — keys of the ":00" symbol. Press the ◇ key to store the data. "Switch on" is programmed in exactly the same way as described above after operating the ⏲ key. With this function, while it is easy to set the hours it is tricky to set the minutes accurately because it is only possible to display them in tens and not individually. Do not forget to return to the "NORMAL" mode after programming standby or switch-on.

TELETEXT SYSTEM

The aim of this teletext system is to give the user a more comprehensive, convenient, and less time wasting service. This is accomplished by using a microprocessor to take advantage of enhancements in the transmission of Teletext Data (known as Fastext), to capture new pages of text in the memory, while the user continues to watch TV programmes, or read a page of displayed text. In addition, your HITACHI receiver can store up to six pages of text information on each of the first nine programme positions, for you to read at your convenience, with rapid availability.

The teletext system has four modes of operation, listed below:

1. Direct (standard) Text.
2. Linked Pages.
3. Favourite Pages.
4. Sub Pages.

DIRECT TEXT (1).

TEXT: This button switches the receiver to 'DIRECT TEXT' from any other mode it is in.

TV: Pressing this button on the handset switches the receiver from 'TEXT' or 'MIX' mode back to 'TELEVISION' mode.

MIX: This button will superimpose the Text Data onto the TV picture. When in this mode the receiver will respond to all text commands from the handset. Thus the user is able to view the programme being transmitted, and the text display simultaneously, without losing control of the teletext functions.

This is the 'UPDATE' button. If pressed when receiver is in 'TEXT' mode, the TV picture will be restored, but the set will remain in 'TEXT' mode. Then at a later time, when the information is updated, the page number will be displayed in the top left hand corner of the screen. The user can then view the new information by pressing the 'TEXT' button
When in 'UPDATE' mode, all the text commands from the handset will work as normal, while the TV picture is being viewed.
You can also view the time when the receiver is in TV mode using this button. When pressed, the time will appear in a boxed display in the top right hand corner for approximately 5 seconds.

When this button is first pressed, the top half of the teletext page being viewed will be displayed at double height. The second press doubles the height of the bottom half of the page, while the third press returns the page to normal size. Repeat sequence as required.

REVEAL: Pressing this button reveals hidden information available on certain text pages, i.e. Quiz pages. Pressing the button a second time conceals the information once more.

HOLD: If the page selected contains more than one page of information it will change to the next page after a period of time. However, pressing the button will hold the present page on display for as long as you desire. To release the "HOLD" condition, press once more.

LINKED PAGES (2).

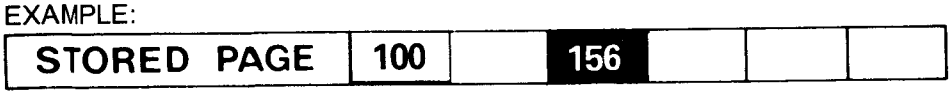
Certain topics have related interests with each other, such as travel and weather, or sport and weather. In this teletext system, such pages have links defined by the transmitting authorities. These links are in the form of promps displayed at the bottom of the screen, in coloured writing.
The handset has four coloured buttons (Link 1 to 4) and a button marked (Link Index). When one of the coloured 'LINK' buttons is pressed, the system will go into the 'LINKED PAGE' mode. This means that as well as capturing and displaying the selected link page, the four new link pages displayed at the bottom of the screen will be captured and stored. After a short time any one of the four pages linked with the displayed page are available instantly when the relevant link button is pressed. When that page is displayed, further link pages appear at the bottom of the page, becoming available for viewing after the short time needed for capturing, and so on continuously. Pressing the link index button returns the text display to the index page.

FAVOURITE PAGES (3).

This facility allows the permanent storage of six page numbers on each of the first nine TV programme selections (1-9). The user can select and store those text pages he most uses. Having made a list of the favourite pages you desire on each programme, select a programme from 1 to 9, press 'TEXT' button and proceed as follows.

1. Press 'STORE' button on handset. The box diagram shown below will appear at the bottom of the page. Some of the boxes may be empty, and the word 'STORE' appears at the top right hand side of the page.

EXAMPLE:



2. Press a number (1-6) on the handset to select the required store box. For example, if button 3 is pressed, whatever number is there will disappear and that box will become blue in colour. The word 'STORE' will now be replaced by 'STORE 3' at the top of the screen.

3. Enter your required page number by pressing the numbers of the handset in the correct order. In example above, 1, 5 and 6. The number will automatically appear in the correct box, and will be stored in the system's memory. Repeat operations 2 and 3 until all the required numbers are entered and stored. Every box need not be filled, but the numbers entered must be available on that teletext magazine, or the microprocessor will waste up to 3 minutes searching for a non existent page. To change a favourite page number to a new number, simply carry out operations 1, 2 and 3. Care must be taken not to erase an existing store number that is still required, or enter a wrong page number.

NOTE: Bear in mind that the page selected in Box 1, will be the first page displayed on selecting text from switch on. Once a new text page is selected that will remain in the memory until the receiver is switched off, or a new channel is chosen.

4. Press 'TEXT' button to come out of store function and prevent accidental button pressing spoiling correct entries. When the receiver is first switched on, or a programme containing stored pages is selected, those pages will be captured and stored automatically, after which they can be accessed instantly and displayed, simply by entering 'TEXT' mode, then pressing 'READ' button and the desired box number. The store box diagram shown in the example will appear at the bottom of the page, and the word 'READ' with the corresponding number, at the top right hand of the page. Keep pressing buttons 1-6 to read the pages captured in these boxes.

SUB PAGES (4).

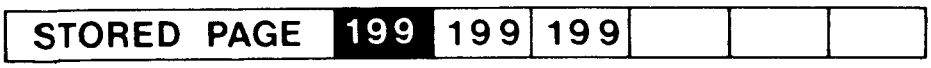
This facility allows the capture and storage of up to 6 sub pages of text. If the page has more than 6 sub pages, the storage is done on a carousel principle. This means that once the sixth page has been captured and stored, the seventh sub page will replace the first, and so on. As an example, if a page has 20 sub pages, and the process starts when page 8 is being transmitted, then pages 8, 9, 10, 11, 12 and 13, will be stored first. The they will then be replaced by pages 14, 15, 16, 17, 18, and 19, then these will also be replaced by pages 20, 1, 2, 3, 4, 5, and so on. Thus, there are always up to six pages stored at any one time, and any one of these can be displayed immediately by pressing the appropriate button (1-6) on the handset.

To use the sub page facility, select a teletext page as normal that is known to contain sub pages, the proceed as follows:—

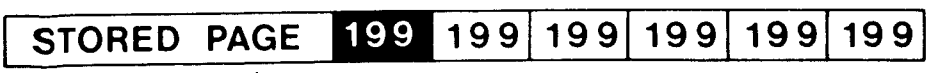
1. Press 'TEXT' button then press the 'STORE' button . The page displayed will change to the last favourite page that was selected.
2. Press button. The text page containing sub pages will now reappear, and the store diagram at the bottom of the page will appear, with all but the first box empty. This first box will contain the number of the wanted page, and as each sub page is captured, the same number will appear in the next box.

EXAMPLE:

Page selected



3 sub pages captured



6 sub pages captured

The stored sub pages can be displayed at any time by pressing the relevant number on the handset corresponding to the desired box number. The initial capture of pages to fill the 6 boxes may take up to two minutes.

OTHER FUNCTIONS

TIME PAGE: Pressing this button removes the time display in the right hand corner of the text page displayed, and allows entry of a 'SUB PAGE' number. For example, if you want to view page 13 of a 15 page item, then follow this procedure: Press 'TIME PAGE' button, and the time display will be replaced by T 00:00. Enter 00:13 by pressing the digits on the handset, then press button. The TV picture is now returned, and when sub page 13 is found the page number appears in the top left hand corner of the screen. Press 'TEXT' button to view.

NEWSFLASH: If you have selected this page and you wish to read the newsflash every time it is updated, then press button. The TV picture is will now be restored, and when the newsflash item changes, the new information will automatically be displayed. Repeat this procedure for as long as required, then press 'TV' button to return to normal viewing.

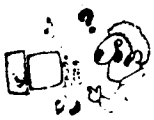
NOTES 1: If this is not your first experience of teletext receivers, you will find the teletext system fitted in this HITACHI set, quite different from previous types, and does not operate in quite the same way. Follow the instructions given in these pages for each function required.

NOTE 2: When 'TEXT' mode is selected, all the controls on the front control panel will be disabled.

CHECKING THE RECEIVER BY YOURSELF

If your TV set does not operate properly, please check the following points before phoning a service technician.

No picture no sound:
See that the TV receiver is plugged in and that the mains switch is ON. Check that receiver is not in standby mode. Adjust the brightness control to maximum. If brightness is OK, check that the aerial is connected.



No picture but sound is OK:
Is it the brightness control? Adjust brightness to maximum.

Picture is not coloured:
Are you sure that the programme is being transmitted in colour? Is the colour control adjusted correctly.

Ghosts (double images):
Change the direction, height or position of the aerial. Reflections from buildings or mountains cause this phenomenon. A highly directional aerial may improve the reception.

Noise or interference on the screen:
White spots or horizontal streaks may appear on the screen. Often caused by interference from cars, neon lamps, electrical drills or other electrical appliances. The aerial should therefore be installed away from such interference sources.

Snow:
Small dots may appear on the entire screen. Check the aerial connection or the direction of the aerial.

Radio frequency interference:
This interference produces moving ripples or diagonal streaks. This is not caused by the receiver, but is produced by interference from other sources.

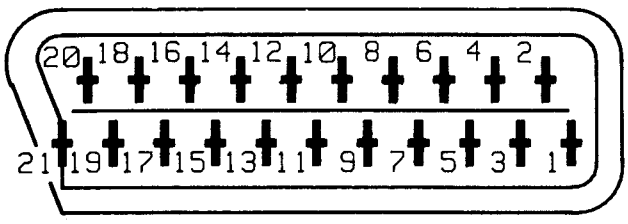
SOME GENERAL NOTES ON THIS EQUIPMENT

1. Avoid places where dust is a problem, and do not place your receiver near radiators or other heat sources, as overheating could lead to faulty performance. Also, try to place your receiver where no light (artificial or sunlight) shines on the screen as this affects picture quality and could prevent the receiver from responding to commands from the remote control handset.
2. Keep all magnetic material away from the face of the TV tube as magnetic fields may cause undesirable effects on the picture.
3. Never use thinners or chemical solvents to clean your cabinet.
4. Occasionally you may receive a mild electric shock from the picture tube. This is only the same type of static electricity you sometimes experience when taking off items of clothing.
5. Avoid knocking or dropping the remote control unit to the floor as this could damage precision parts assembled in this unit.
6. When batteries are exhausted, the remote control unit will not work or the operation becomes unstable — replace the old batteries.
7. When TV games, home computers etc. are used in conjunction with the receiver, avoid using excessive contrast and brightness, as this may damage the phosphor coating of the picture tube.
8. Internal preset controls have critical settings and should under no circumstances be adjusted by anyone not having the necessary equipment and training.
9. Cathode Ray Tubes for use in television receivers may become dangerous if damaged or handled improperly by unskilled persons.

SPECIFICATIONS

TV standard	625 line standards BG, L, I, K1 and IT	
Channel coverage	UHF	Channels 21-68
	BAND 1 VHF	Channels 2-4
	BAND 3 VHF	Channels 5-12
	CABLE	Channels S01-S40
Programme selectors	Programme up and down buttons with 29 programme remote control.	
Aerial impedance	75 ohm unbalanced type	
Picture tube	A51EAL30 X11	
Speaker	70 × 130mm 8 ohms	
Sound output	5 Watts R.M.S. × 2	
Mains voltage	220V AC 50Hz	
Weight	29.3kgs approximately	
Dimensions (W×H×D)	504×460×485mm	

PERI SOCKET



Pin No.	Function
1	Audio out (right)
2	Audio input (right)
3	Audio out (left)
4	Ground (audio)
5	Ground
6	Audio input (left)
7	Blue video input
8	Switching input
9	Ground
10	
11	Green video input
12	
13	Ground
14	
15	Red Video input
16	STATUS (blanking) input
17	Ground
18	Ground
19	Composite Video output
20	Composite Video input
21	Ground

DIRECT ENTRY SELECTION

STANDARDS

Europe	BG
France	L
UK/Eire	I
Italy	IT
France O'Seas	KI

Handset Entry	Standard	Vision Carrier MHz	On-Screen Display
CH+0+1	I	45.75	CH 01
	IT	46.25	CH 01
CH+0+2	BG	48.25	CH 02
	IT	48.25	CH 02
	I	53.75	CH 02
	L	55.75	CH 02
CH+0+3	BG	55.25	CH 03
	IT	55.25	CH 03
	L	60.50	CH 03
	I	61.75	
CH+0+4	BG	62.25	CH 04
	IT	62.25	CH 04
	L	63.75	CH 04
	I	175.25	CH 04
	KI	175.25	CH 04
CH+0+5	BG	175.25	CH 05
	IT	175.25	CH 05
	L	176.00	CH 05
	I	183.25	CH 05
	KI	183.25	CH 05
CH+0+6	BG	182.25	CH 06
	IT	182.25	CH 06
	L	184.00	CH 06
	I	191.25	CH 06
	KI	191.25	CH 06
CH+0+7	BG	189.25	CH 07
	IT	189.25	CH 07
	L	192.00	CH 07
	I	199.25	CH 07
	KI	199.25	CH 07
CH+0+8	BG	196.25	CH 08
	IT	196.25	CH 08
	L	200.00	CH 08
	I	207.25	CH 08
	KI	207.25	CH 08
CH+0+9	BG	203.25	Ch 09
	IT	203.25	CH 09
	L	208.00	CH 09
	I	215.25	CH 09
	K	215.25	CH 09
CH+1+0	BG	210.25	Ch 10
	IT	210.25	CH 10
	L	216.00	Ch 10
CH+1+1	BG	217.25	CH 11
	IT	217.25	CH 11
CH+1+2	BG	224.25	CH 12
	IT	224.25	Ch 12
CH+1+3	IT	53.75	CH 13
CH+1+4	IT	62.25	CH 14
CH+1+5	IT	82.25	CH 15
CH+1+6	IT	175.25	CH 16
CH+1+7	IT	183.75	CH 17
CH+1+8	IT	192.25	CH 18
CH+1+9	IT	201.25	CH 19
CH+2+0	IT	210.25	CH 20

Handset Entry	Standard	Vision Carrier MHz	On-Screen Display
CH+2+1	All Standards	471.25	CH 21
⟆		+8 MHz every channel	⟆
		⟆	
CH+6+8		847.25	CH 68
CH+6+9	IT	855.25	CH 69
CH+7+0	IT	863.25	CH 70
CH+7+0	IT	871.25	CH 71
CH+7+2	IT	879.25	CH 72
CH+7+3	IT	887.25	CH 73
CH+CH+0+0+1	Cable	69.25	S 1
CH+CH+0+0+2	Cable	76.25	S 2
CH+CH+0+0+3	Cable	83.25	S 3
CH+CH+0+1	Cable	105.25	S 01
CH+CH+0+2	Cable	112.25	S 02
CH+CH+0+3	Cable	119.25	S 03
CH+CH+0+4	Cable	126.25	S 04
CH+CH+0+5	Cable	133.25	S 05
CH+CH+0+6	Cable	140.25	S 06
CH+CH+0+7	Cable	147.25	S 07
CH+CH+0+8	Cable	154.25	S 08
CH+CH+0+9	Cable	161.25	S 09
CH+CH+1+0	Cable	168.25	S 10
CH+CH+1+1	Cable	231.25	S 11
CH+CH+1+2	Cable	238.25	S 12
CH+CH+1+3	Cable	245.25	S 13
CH+CH+1+4	Cable	252.25	S 14
CH+CH+1+5	Cable	259.25	S 15
CH+CH+1+6	Cable	266.25	S 16
CH+CH+1+7	Cable	273.25	S 17
CH+CH+1+8	Cable	280.25	S 18
CH+CH+1+9	Cable	287.25	S 19
CH+CH+2+0	Cable	294.25	S 20
CH+CH+2+1	Cable	303.25	S 21
⟆	⟆	+8 MHz Every channel	⟆
CH+CH+4+1	Cable	463.25	S 41